

Selaginella decipiens Warb. (Selaginellaceae), a new record from China

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Abstract *Selaginella decipiens* Warb. (Selaginellaceae) is reported from Guangxi and Yunnan provinces of China. The taxon was previously known from North Vietnam and Northeast India. It can be confused with *S. bodinieri* Hieron. in general habit , and with *S. chingii* Alston in shape of lateral leaves , but is characterized by its large , subentire lateral leaves , large axillary leaves , and very short strobili .

Key words *Selaginella* , *Selaginella decipiens* Warb. , new record , China .

Selaginella decipiens Warb. (Selaginellaceae) is herein reported to occur in Yunnan and Guangxi provinces , China. The taxon was previously known only from Northeast India (Warburg , 1899 ; Alston , 1945 ; Baishya & Rao , 1982 ; Dixit , 1984 , 1992) and North Vietnam (Alston , 1951 ; Hô , 1991) , not recorded from China. An early collection of this species from South Yunnan , K. M. Feng 13097 (PE) , was named as a new species , *S. marlipoensis* Ching , but not published. It was also collected from Southwest Guangxi. In general , *S. decipiens* Warb. shares some common characters with *S. bodinieri* Hieron. and *S. chingii* Alston. It superficially resembles the former in general habit , and has lateral leaves similar to those of the latter. The differences among them are shown in Table 1 .

Selaginella decipiens can be easily distinguished from *S. bodinieri* and *S. chingii* by its large , subentire lateral leaves on the upper part of the main stems and primary branches , uniform leaves on the main stems below the leafy portion , large axillary leaves , somewhat glabrous roots and very short strobili .

Selaginella decipiens Warb. in Monsunia 1 : 127. 1899 ; Alston in Proc. Nat. Inst. Sci. India 11 : 228. 1945 ; Alston in Lecomte , Fl. Gén. Indo-Chine 7 (2) : 586. 1951 ; Baishya & R. R. Rao , Ferns and Fern-allies of Meghalaya State , India : 26. 1982 ; R. D. Dixit , Cens. Indian Pterid. 12. 1984 ; P. H. Hô , Ill. Fl. Vietnam 1 : 35 , cum fig. 1991 ; R. D. Dixit , Selag. India : 86 , f. 49 , pl. 49. 1992. Type : India , Assam , Helfer s. n. (holotype , B ; isotypes , CAL , K).

拟大叶卷柏 Fig. 1

Plants terrestrial , evergreen , erect , 45 – 80 cm long , with a long simple main stem , pinnately decompound in upper part , blade-like , with creeping subterranean rhizomes and stolons. Rhizophores restricted to creeping rhizomes and stolons , 4 – 9 cm long (not including the forked roots) , rather thick , 0.6 – 1.4 mm diam. ; roots much forked , glabrous. Main stem branched from middle part (the branches not very regular , some much longer , and not equal on both sides) , unbranched main stem 15 – 30 cm tall below the leafy portion , 1 – 2 mm diam. in basal part of main stem , angulate , sulcate. Leaves on main stems or below the leafy portion distant , about the same size as

Table 1 Comparison of *Selaginella decipiens* with *S. bodinieri* and *S. chingii*

	<i>S. bodinieri</i>	<i>S. chingii</i>	<i>S. decipiens</i>
Habit	erect or suberect	creeping or dropping on cliffs	erect
Rhizophores	restricted to lower part of stem , 1.5 – 4 cm long	restricted to lower part of stem , 0.5 – 2.5 cm long	restricted to creeping rhizome and stolons , 4 – 9 cm long
Roots	hairy	densely hairy	glabrous
Axillary leaves	2.0 – 3.2 × 0.9 – 1.6 mm	2.0 – 2.8 × 0.8 – 1.3 mm	3.5 – 4.2 × 1.9 – 2.8 mm
Median leaves	2.4 – 3.4 × 1.2 – 1.8 mm , margins denticulate or ciliate at base	0.8 – 1.6 × 0.4 – 1.0 mm , margins denticulate	1.2 – 2.0 × 0.4 – 1.0 mm , margins denticulate
Lateral leaves	3.4 – 4.4 × 1.6 – 2.2 mm ,acro- scopic margin denticulate or cili- ate at base , basiscopic margin en- tire	2.5 – 3.2 × 1.1 – 1.4 mm , acroscopic margin minutely den- ticulate , basiscopic margin minutely denticulate	3.0 – 4.6 × 1.4 – 3.0 mm ,acro- scopic margin subentire , basis- copic margin entire
Strobili	4.0 – 16.0 × 1.4 – 2.4 mm	5.0 – 15.0 × 1.8 – 3.0 mm	3.0 – 6.5 × 1.6 – 2.5 mm
Megaspores	light-yellow , granulate , 146.7 – 266.7 × 173.3 – 333.3 μm	grey , granulate , reticulate , 160.0 – 253.3 × 200.0 – 293.3 μm	whitish or slightly pink , granu- late , 200.0 – 346.7 × 273.3 – 360.0 μm
Microspores	yellow , tuberculate , verrucate , 17.3 – 32.0 × 22.7 – 27.2 μm	orange-red ; verrucate-rugulate , 19.6 – 32.7 × 18.3 – 39.2 μm	yellow , tuberculate-rugulate , 15.1 – 21.6 × 18.3 – 26.8 μm

those on branches , uniform , green , obliquely ovate-lanceolate , appressed , margin minutely denticulate . Primary leafy branches 5 – 8 pairs , 2 – 3 times pinnately branched , secondary branches 1 – 2 times pinnately branched , branchlets regular , the middle primary branches 7 – 19 cm long , 2.5 – 6.5 cm wide , adjacent primary branches on main stem 3.5 – 8.0 cm apart , dorsiventrally flattened , main stem of the leafy portion including leaves 6 – 9 mm wide in the middle , ultimate branches 4 – 5 mm wide including leaves . Leaves decussately arranged except on the unbranched main stem , dimorphous , herbaceous , surface glabrous , not wrinkled , margin subentire , slightly white-margined . Axillary leaves on main stem strongly asymmetrical , trapeziform or obliquely widely ovate , 3.5 – 4.2 × 1.9 – 2.8 mm , margin minutely denticulate , base exauriculate , on branches ovate . Median leaves more or less symmetrical , those on main stems of the leafy portion obviously larger than those on branches , 2.2 – 2.8 × 0.9 – 1.3 mm , on primary branches oblong-lanceolate , contiguous to imbricate , 1.2 – 2.0 × 0.4 – 1.0 mm , slightly keeled , apex aristate , often bent backwards , base truncate , margins denticulate . Lateral leaves asymmetrical , those on main stem of the leafy portion obviously larger than those on branches , 4.6 – 6.3 × 2.7 – 3.6 mm , on primary branches ovate-triangular or oblong-falcate , spreading , 3.0 – 4.6 × 1.4 – 3.0 mm , apex subacute or obtuse , subentire , the acroscopic base strongly enlarged , broader , overlapping the stem , the basiscopic base rounded , the acroscopic margin minutely denticulate , the basiscopic margin entire . Strobili compact , dorsiventrally complanate , solitary , terminal , 3.0 – 6.5 × 1.6 – 2.5 mm ; sporophylls dimorphous or strongly dimorphous , margin not white-margined , resupinate , upper sporophylls larger with denticulate sporophyll-ptyx on the inner surface , ovate-lanceolate , margin denticulate , not keeled , apex acute ; lower sporophylls ovate , margin denticulate , carinate , apex acuminate to aristate , usually with only microsporangia or only one megasporangium at base of lower side , the rest being microsporangia ; microspores yellow , tuberculate-rugulate , 15.1 – 21.6 × 18.3 – 26.8 μm ; megaspores whitish or slightly pink , granulate , 200.0 – 346.7 × 273.3 – 360.0 μm .

Distributions . China (Guangxi , Yunnan) , Vietnam (Tonkin) , and India (Assam) .

Ecology . In dense forests at altitudes of 1200 – 1500 m .

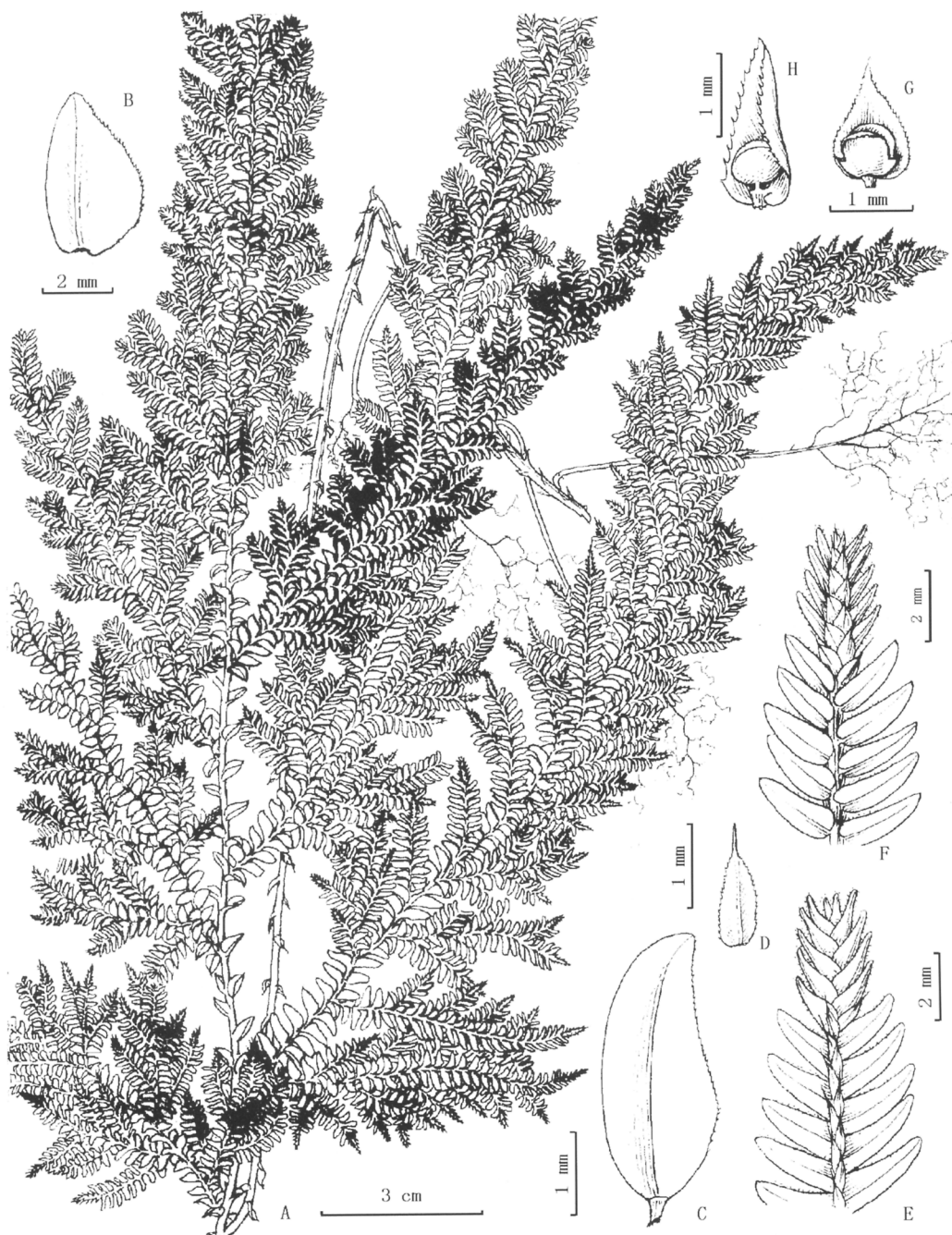


Fig. 1. *Selaginella decipiens* Warb. A, habit; B, axillary leaf; C, lateral leaf; D, median leaf; E, strobilus, dorsal review; F, strobilus, ventral review; G, megasporophyll; H, microsporophyll. Drawn by C. Z. Ji from X. C. Zhang 1130.

Representative specimens examined.

China. **Guangxi** (广西): Longzhou (Longjin) (龙州), D. Q. Zhou 21394 (PE); Napo (那坡), Xiahua (下华), Guinong Mt. (规弄山), X. C. Zhang et al. 1130 (PE). **Yunnan**

(云南): Malipo (麻栗坡), J. Y. Huang (Hwang Jin-Yin), K. M. Feng 13097 (PE). New record to China.

India. Assam, Griffith 1499 (K), Parry 364 (K); Garo Hills, Baghmara, Parry 1083 (K); Khasia Hills, Riddell 70 (K), Clarke 15037a (K), 45237a (K), 45237b (K), 15646a (K), 16560a (K), 15037b (K), 16560g (K), Gamble 6185 (K); Hook. f. & Thomson s. n. (K).

Vietnam. Tonkin, Balansa 1991 (P).

The report of the occurrence of this species from Malaya by van Alderwerelt (1915) is dubious.

Key to *Selaginella decipiens*, *S. bodinieri* and *S. chingii*

- 1. Stems erect or suberect.
 - 2. Stems erect, rooting at base; lateral leaves subentire ***S. decipiens*** Warb.
 - 2. Stems suberect, rooting in the lower one-third; lateral leaves ciliate at base ***S. bodinieri*** Hieron.
- 1. Stems creeping, rooting at intervals; lateral leaves minutely denticulate ***S. chingii*** Alston

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中国卷柏属一新记录种——拟大叶卷柏

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摘要 报道了拟大叶卷柏 *Selaginella decipiens* Warb. 在中国广西和云南的分布。该种的分布原来只知道在越南北部和印度东北部。它在形体上近似大叶卷柏 *S. bodinieri* Hieron.,而侧叶形状和秦氏卷柏 *S. chingii* Alston 的一致,但以其较大的、近全缘的侧叶,以及较大的腋叶和较短的孢子叶穗同上述两种不同。

关键词 卷柏属;拟大叶卷柏;新记录;中国